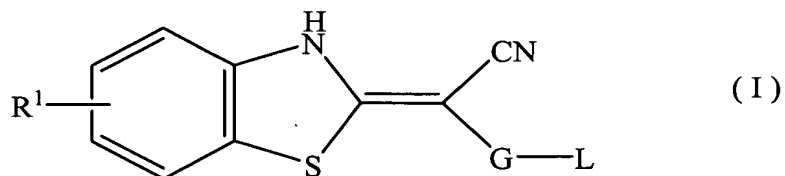


IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): ~~Use of~~ A benzothiazole derivatives derivative
according to formula I:



as well as its tautomers, its geometrical isomers, its optically active forms as enantiomers, diastereomers and its racemate forms, as well as pharmaceutically acceptable salts thereof, wherein

G is ~~[[an]]~~ a pyrimidinyl group~~[[.]]~~;

L is an C₁-C₆-alkoxy, ~~[[or]]~~ an amino group, or ~~[[an]]~~ a 3-8 membered heterocycloalkyl, containing at least one heteroatom selected from the group consisting of N, O, and S; and

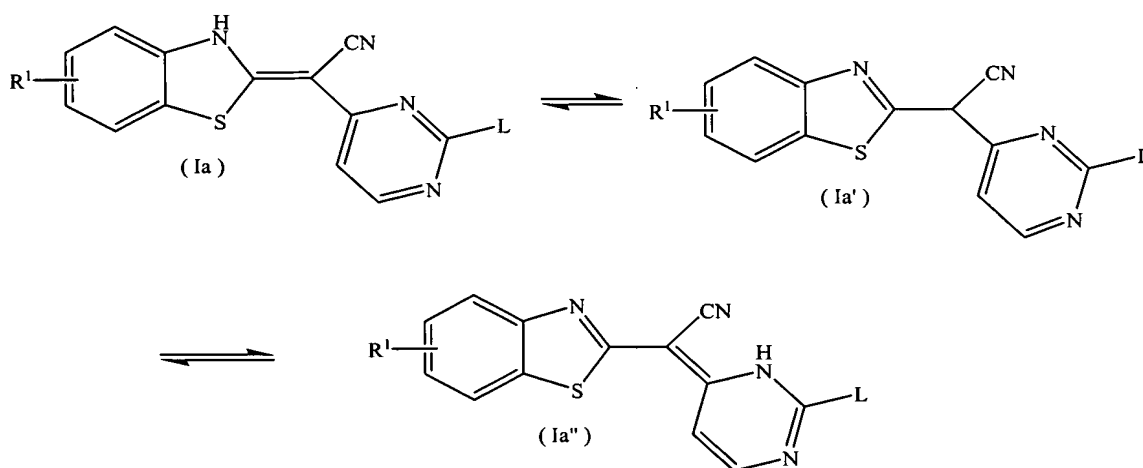
R¹ is selected from the group ~~comprising or~~ consisting of hydrogen, sulfonyl, amino, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl or C₁-C₆-alkoxy, aryl, halogen, cyano ~~or~~ and hydroxy,

for the treatment of metabolic disorders mediated by insulin resistance or hyperglycemia, comprising diabetes type II, inadequate glucose tolerance, insulin resistance, obesity, and polycystic ovary syndrome (~~PCOS~~).

Claim 2 (Currently Amended): ~~Use~~ The benzothiazole derivative according to claim 1, wherein the disease is diabetes type II.

Claim 3 (Currently Amended): ~~Use~~ The benzothiazole derivative according to claim 1 ~~or 2~~, wherein R¹ is H or C₁-C₃ alkyl.

Claim 4 (Currently Amended): ~~Use~~ The benzothiazole derivative according to ~~any of~~ ~~claims 1 to 3~~ claim 1, wherein the compound has any of formulae (Ia), (Ia') or (Ia''):



wherein R¹ is ~~[[is]]~~ selected from the group ~~comprising or~~ consisting of hydrogen, sulfonyl, amino, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, ~~[[or]]~~ C₁-C₆-alkoxy, aryl, halogen, cyano, ~~[[or]]~~ and hydroxy~~[[.]]~~; and

L is an amino group of the formula -NR³R⁴, wherein

R³ and R⁴ are each independently from each other H, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, C₁-C₆-alkoxy, aryl, heteroaryl, saturated or unsaturated 3-8-membered cycloalkyl, 3-8-membered heterocycloalkyl, (wherein said cycloalkyl, heterocycloalkyl, aryl or heteroaryl groups may be fused with 1-2 further cycloalkyl, heterocycloalkyl, aryl or heteroaryl group), C₁-C₆-alkyl aryl, C₁-C₆-alkyl heteroaryl, C₁-C₆-alkenyl aryl, C₁-C₆-alkenyl heteroaryl, C₁-C₆-alkynyl aryl, C₁-C₆-alkynyl heteroaryl, C₁-C₆-alkyl cycloalkyl, C₁-C₆-alkyl

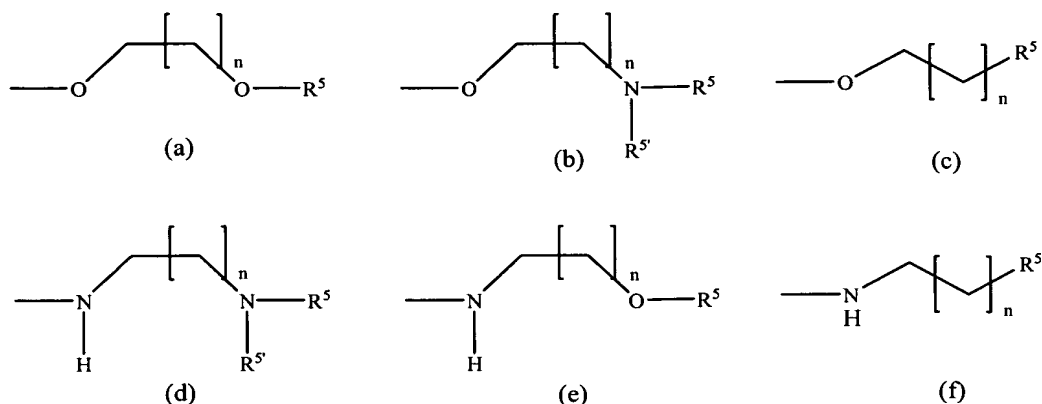
heterocycloalkyl, C₁-C₆-alkenyl cycloalkyl, C₁-C₆-alkenyl heterocycloalkyl, C₁-C₆-alkynyl cycloalkyl, C₁-C₆-alkynyl heterocycloalkyl[,]; or

R³ and R⁴ may form a ring together with the nitrogen to which they are bound.

Claim 5 (Currently Amended): ~~Use~~ The benzothiazole derivative according to claim 4, wherein R³ is hydrogen or a methyl or ethyl or propyl group and R⁴ is selected from the group consisting of a (C₁-C₆)-alkyl, C₁-C₆-alkyl-aryl, C₁-C₆-alkyl-heteroaryl, cycloalkyl, heterocycloalkyl, aryl or heteroaryl, and 4-8 membered saturated or unsaturated cycloalkyl.

Claim 6 (Currently Amended): ~~Use~~ The benzothiazole derivative according to claim 4, wherein R³ and R⁴ form an optionally substituted piperazine or a piperidine or a morpholine or a pyrrolidine ring together with the nitrogen to which they are bound, whereby said optional substituent is selected from the group consisting of a C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, C₁-C₆-alkoxy, aryl, heteroaryl, saturated or unsaturated 3-8-membered cycloalkyl, 3-8-membered heterocycloalkyl, (wherein said cycloalkyl, heterocycloalkyl, aryl or heteroaryl groups may be fused with 1-2 further cycloalkyl, heterocycloalkyl, aryl or heteroaryl group), C₁-C₆-alkyl aryl, C₁-C₆-alkyl heteroaryl, C₁-C₆-alkenyl aryl, C₁-C₆-alkenyl heteroaryl, C₁-C₆-alkynyl aryl, C₁-C₆-alkynyl heteroaryl, C₁-C₆-alkyl cycloalkyl, C₁-C₆-alkyl heterocycloalkyl, C₁-C₆-alkenyl cycloalkyl, C₁-C₆-alkenyl heterocycloalkyl, C₁-C₆-alkynyl cycloalkyl, and C₁-C₆-alkynyl heterocycloalkyl.

Claim 7 (Currently Amended): ~~Use~~ The benzothiazole derivative according to claim 5, wherein L is selected from the group consisting of:



wherein n is 1 to 10, and preferably 1 to 6,

R⁵ and R^{5'} are independently selected from each other from the group consisting of H, C₁-C₁₀-alkyl, aryl or hetero-aryl, C₁-C₆ alkyl-aryl, and C₁-C₆-alkyl-heteroaryl.

Claim 8 (Currently Amended): ~~Use~~ The benzothiazole derivative according to ~~any of the preceding claims~~ claim 1, wherein the compound is selected from the ~~following~~ group consisting of:

- 1,3-benzothiazol-2-yl(2,6-dimethoxy-4-pyrimidinyl)acetonitrile;
- 1,3-benzothiazol-2-yl(2-{[2-(1H-imidazol-5-yl)ethyl]amino}-4-pyrimidinyl)acetonitrile;
- 1,3-benzothiazol-2-yl[2-(1-piperazinyl)-4-pyrimidinyl]acetonitrile;
- 1,3-benzothiazol-2-yl[2-(4-benzyl-1-piperidinyl)-4-pyrimidinyl]acetonitrile;
- 1,3-benzothiazol-2-yl[2-(4-methyl-1-piperazinyl)-4-pyrimidinyl]acetonitrile;
- 1,3-benzothiazol-2-yl[2-(4-morpholinyl)-4-pyrimidinyl]acetonitrile;
- 1,3-benzothiazol-2-yl[2-(methylamino)-4-pyrimidinyl]acetonitrile;
- 1,3-benzothiazol-2-yl[2-{4-[2-(4-morpholinyl)ethyl]-1-piperazinyl}-4-pyrimidinyl]acetonitrile;
- 1,3-benzothiazol-2-yl{2-[4-(benzyloxy)-1-piperidinyl]-4-pyrimidinyl} acetonitrile;

1,3-benzothiazol-2-yl[2-(4-hydroxy-1-piperidiny)-4-pyrimidinyl]acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(dimethylamino)ethyl]amino}-4-pyrimidinyl)acetonitrile;

1,3-benzothiazol-2-yl[2-(dimethylamino)-4-pyrimidinyl]acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-methoxyethyl)amino-4-pyrimidinyl]} acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-hydroxyethyl)amino]-4-pyrimidinyl} acetonitrile;

1,3-benzothiazol-2-yl[2-(propylamino)-4-pyrimidinyl]acetonitrile;

1,3-benzothiazol-2-yl(2-{[3-(1H-imidazol-1-yl)propyl]amino}-4-pyrimidinyl)acetonitrile;

1,3-benzothiazol-2-yl[2-(1-pyrrolidinyl)-4-pyrimidinyl]acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-phenylethyl)amino]-4-pyrimidinyl} acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(2-pyridinyl)ethyl]amino}-4-pyrimidinyl)acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-pyridinylmethyl)amino]-4-pyrimidinyl} acetonitrile;

1,3-benzothiazol-2-yl{2-[4-(1H-1,2,3-benzotriazol-1-yl)-1-piperidinyl]-4-pyrimidinyl} acetonitrile;

1,3-benzothiazol-2-yl{2-[4-(2-pyrazinyl)-1-piperazinyl]-4-pyrimidinyl} acetonnitrile;

1,3-benzothiazol-2-yl{2-[4-(2-pyrimidinyl)-1-piperazinyl]-4-pyrimidinyl} acetonitrile;

1,3-benzothiazol-2-yl(2-[2-(3-pyridinyl)ethyl]amino)-4-pyrimidinyl)acetonitrile;

1,3-benzothiazol-2-yl(5-bromo-2-{[2-(dimethylamino)ethyl]amino}-4-pyrimidinyl)acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-morpholin-4-ylethyl)amino]pyridimidin-4-yl} acetonitrile;

1,3-benzothiazol-2-yl[2-(4-{3-[(trifluoromethyl)sulfonyl]anilino} piperidin-1-yl)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl(2-{[3-(2-oxopyrrolidin-1-yl)propyl]amino}pyrimidin-4-yl)-acetonitrile;

1,3-benzothiazol-2-yl(2-{methyl[3-(methylamino)propyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-[3-(4-methylpiperazin-1-yl)propyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl{2-[(3-morpholin-4-ylpropyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(1-methyl-1H-imidazol-4-yl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(1H-indol-3-yl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(4-hydroxyphenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

tert-butyl({4-[1,3-benzothiazol-2-yl(cyano)methyl]pyrimidin-2-yl}amino)acetate;

{2-[(3-aminopropyl)amino]pyrimidin-4-yl}(1,3-benzothiazol-2-yl)acetonitrile;

{2-[(2-aminoethyl)amino]pyrimidin-4-yl}(1,3-benzothiazol-2-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[3-(dimethylamino)propyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-piperidin-1-ylethyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(1-methyl-1H-imidazol-5-yl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl[2-(benzylamino)pyrimidin-4-yl]acetonitrile;

isopropyl 3-({4-[1,3-benzothiazol-2-yl(cyano)methyl]pyrimidin-2-yl}amino)propanoate;

1,3-benzothiazol-2-yl{2-[(3-hydroxypropyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl{2-[(pyridin-3-ylmethyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl{2-[(pyridin-4-ylmethyl)amino]pyrimidin-4-yl}acetonitrile;

tert-butyl 4-[2-(4-[1,3-benzothiazol-2-yl(cyano)methyl]pyrimidin-2-yl)amino)ethyl]phenylcarbamate;

(2-{[2-(4-aminophenyl)ethyl]amino}pyrimidin-4-yl)(1,3-benzothiazol-2-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(3,4-dimethoxyphenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(3-methoxyphenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(2-fluorophenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl[2-(2-[3-(trifluoromethyl)phenyl]ethyl)amino]pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-hydroxy-2-phenylethyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-{[3-(trifluoromethyl)pyridin-2-yl]amino}ethyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(3-chlorophenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(3,4-dichlorophenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(4-methoxyphenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(4-methylphenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(3-fluorophenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(4-phenoxyphenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(2-phenoxyphenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(4-bromophenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(4-fluorophenyl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-[1,1'-biphenyl]-4-ylethyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl{2-[(2-{4-[hydroxy(oxido)amino]phenyl}ethyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl(2-{[2-(1H-1,2,4-triazol-1-yl)ethyl]amino}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl(2-{[3-(1H-pyrazol-1-yl)propyl]amino}pyrimidin-4-yl)acetonitrile;

4-[2-(4-[1,3-benzothiazol-2-yl(cyano)methyl]pyrimidin-2-yl)amino)ethyl]benzenesulfonamide;

{2-[(2-pyridin-3-ylethyl)amino]pyrimidin-4-yl}[5-(trifluoromethyl)-1,3-benzothiazol-2-yl]acetonitrile;

1,3-benzothiazol-2-yl{2-[(1H-tetrazol-5-ylmethyl)amino]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl[2-(benzyloxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl{2-[(4-pyridin-3-ylbenzyl)oxy]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl[2-(pyridin-4-ylmethoxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl[2-(pyridin-2-ylmethoxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl[2-(3-pyridin-2-ylpropoxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl{2-[(4-methoxybenzyl)oxy]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl[2-(pyridin-3-ylmethoxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl{2-[2-(4-methoxyphenyl)ethoxy]pyrimidin-4-yl}acetonitrile;

1,3-benzothiazol-2-yl[2-([1,1'-biphenyl]-3-ylmethoxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl{2-[(3,4,5-trimethoxybenzyl)oxy]pyrimidin-4-yl} acetonitrile;

1,3-benzothiazol-2-yl{2-[(3,4-dichlorobenzyl)oxy]pyrimidin-4-yl} acetonitrile;

1,3-benzothiazol-2-yl[2-({3-[(dimethylamino)methyl]benzyl} oxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl{2-[(1-oxidopyridin-3-yl)methoxy]pyrimidin-4-yl} acetonitrile;

1,3-benzothiazol-2-yl(2- { [4-(morpholin-4-ylmethyl)benzyl]oxy} pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl{2-[(4-pyridin-2-ylbenzyl)oxy]pyrimidin-4-yl} acetonitrile;

1,3-benzothiazol-2-yl(2- { [4-(piperidin-1-ylmethyl)benzyl]oxy} pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl[2-(4-methoxyphenoxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl[2-(4-butoxyphenoxy)pyrimidin-4-yl]acetonitrile;

{2-[4-(4-acetylpiperazin-1-yl)phenoxy]pyrimidin-4-yl}(1,3-benzothiazol-2-yl)acetonitrile;

[2-(4-methoxyphenoxy)pyrimidin-4-yl][5-(trifluoromethyl)-1,3-benzothiazol-2-yl]acetonitrile;

N-[2-({4-[1,3-benzothiazol-2-yl(cyano)methyl]pyrimidin-2-yl} amino)ethyl]-4-chlorobenzamide;

1,3-benzothiazol-2-yl(2-methoxy-4-pyrimidinyl)acetonitrile;

1,3-benzothiazol-2-yl[2-({4-[(4-methylpiperazin-1-yl)methyl]benzy;} oxy)-pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl[2-({4-[(4-benzyl-piperazin-1-yl)methyl]-benzyl} oxy)pyrimidin-4-yl]acetonitrile;

1,3-benzothiazol-2-yl(2-{[4-(piperazin-1-ylmethyl)benzyl]oxy}pyrimidin-4-yl)acetonitrile;

1,3-benzothiazol-2-yl[2-({4-[(4-formylpiperazin-1-yl)methyl]benzyl}oxy)pyrimidin-4-yl]acetonitrile;

[2-({4-[(4-acetyl)piperazin-1-yl)methyl]benzyl}oxy)pyrimidin-4-yl](1,3-benzothiazol-2-yl)acetonitrile;

(3H-Benzothiazol-2-ylidene)-{2-[4-(4-[1,2,4]oxadiazol-3-ylmethyl-piperazin-1-ylmethyl)-benzyloxy]-pyrimidin-4-yl}-acetonitrile;

4-(4-{4-[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazine-1-carboxylic acid methyl ester;

2-[4-(4-{4-[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazin-1-yl]-acetamide;

(2-{4-[4-(2-Amino-acetyl)-piperazin-1-ylmethyl]-benzyloxy}-pyrimidin-4-yl)-(3H-benzothiazol-2-ylidene)-acetonitrile;

[4-(4-{4[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazin-1-yl]-acetic acid methyl ester;

(3H-Benzothiazol-2-ylidene)-(2-{4-[4-(2-methoxy-ethyl)-piperazin-1-ylmethyl]-benzyloxy}-pyrimidin-4-yl)-acetonitrile;

4-(4-{4-[(3H-Benzothiazol-2-ylidene)-cyano-methyl]-pyrimidin-2-yloxymethyl}-benzyl)-piperazine-1-carboxylic acid dimethylamide;

(3H-Benzothiazol-2-ylidene)-{2-[4-(4-ethyl-piperazin-1-ylmethyl)-benzyloxy]-pyrimidin-4-yl}-acetonitrile; and

(3H-Benzothiazol-2-ylidene)-(2-{4-[4-(2-hydroxy-ethyl)-piperazin-1-ylmethyl]-benzyloxy}-pyrimidin-4-yl)-acetonitrile.

Claim 9 (Currently Amended): ~~Use~~ The benzothiazole derivative according to ~~any of the preceding claims claim 1,~~ further comprising at least one supplementary drug selected from the group consisting of insulin, aldose reductase inhibitors, alpha-glucosidase inhibitors, sulfonyl urea agents, biguanides, thiazolidines, PPARs agonists, and GSK-3 inhibitors.

Claim 10 (Currently Amended): ~~Use~~ The benzothiazole derivative according to claim 9, wherein said supplementary drug is selected from the group consisting of a rapid acting insulin, an intermediate acting insulin, a long acting insulin, a combination of intermediate and rapid acting insulins, Minalrestat, Tolrestat, Sorbinil, Methosorbinil, Zopolrestat, Epalrestat, Zenarestat, Imirestat, Ponalrestat, ONO-2235, GP-1447, CT-112, BAL-ARI 8, AD-5467, ZD5522, M-16209, NZ-314, M-79175, SPR-210, ADN 138, or SNK-860, Miglitol, Acarbose, Glipizide, Glyburide, Chlorpropamide, Tolbutamide, Tolazamide, ~~[[or]]~~ and Glimepiride.

Claim 11 (New): The benzothiazole derivative according to claim 1, wherein n is 1 to 6.

Claim 12 (New): A pharmaceutical composition comprising the benzothiazole derivative according to claim 1 and an adjuvant, carrier, diluent, or excipient.

Claim 13 (New): A method for the treatment of metabolic disorders mediated by insulin resistance or hyperglycemia, comprising diabetes type II, inadequate glucose tolerance, insulin resistance, obesity, and polycystic ovary syndrome, which comprises administering an effective amount of the pharmaceutical composition according to claim 12 to a human or other mammal in need thereof.

· Preliminary Amendment

· Claim 14 (New): A method for the preparation of a pharmaceutical composition for
the treatment of metabolic disorders mediated by insulin resistance or hyperglycemia,
comprising diabetes type II, inadequate glucose tolerance, insulin resistance, obesity, and
polycystic ovary syndrome, which comprises combining the benzothiazole derivative
according to claim 1 with an adjuvant, carrier, diluent, or excipient.